

ABSTRACT

Simple carboxylic acids, in particular dicarboxylic acids such as citric acid shows an unexpected ability to enhance the antimicrobial power of a wide range of disinfectant and/or antibiotic agents. As little as 1% citrate greatly enhances the ability of antibiotics to kill or inhibit a wide range of bacterial species including antibiotic resistant strains. Citrate alone is effective in preventing bacterial growth in platelet concentrates and in red blood cell suspensions. Effective concentrations of citrate cause little if any damage to blood cells. Besides enhancing the power of antibiotics citrate also enhances the antimicrobial properties of disinfectant organic dyes such as crystal violet and methylene blue. In addition citrate enhances the antimicrobial properties of polyphenols of plant origin. Iodine-based disinfectants are also enhanced without enhancing protein denaturation.

09694178-102300